Eastern University, Sri Lanka
Faculty of Commerce and Management
:ond Year - Second Semester Examination in BBA/BCom - 2014/2015
July – 2017 (Proper/Repeat)
MGT 2063 Management Information System

:wer All Five Questions **Time: 03 Hours**

Read the following Case Study and answer the questions given below.

One early morning in the fall of 2007, Dennis Jönsson was reading the latest reports on global warming and thought that someone should to do something about it. Then he realized that he and his fellow coworkers at Nordea, all with airline gold cards and access to the airport lounges, were part of the problem - especially since Nordea employees occupied many of the seats on the 7:10 flight between Copenhagen and Helsinki every morning. Nordea is the largest bank group in the Nordic countries and the Baltic region. It has around 10 million customers, 1,400 branch offices, and a leading online banking position with 6.1 million e-customers. The bank has about 34,000 employees in 23 countries. Since its foundation in 1820, the organization that is now Nordea has incorporated some 250 banks, including Danish Unibank, Finish Merita, Swedish Nordbanken, and Norwegian Christiania Kreditkasse. The history of mergers has resulted in a geographically distributed organization that requires extensive travel between national branches.

Carbon dioxide emissions caused by one person traveling by airplane between two of the Nordic capitals is in the order of 200 kg-twice the amount a car with four passengers emits over the same distance. In total, short-and long-haul air travel makes up about a third of Nordea's total carbon dioxide emissions. Reducing travel is not only desirable from an environmental perspective, but from a cost-saving perspective, too. Every year a substantial amount of money is spent on air travel. In addition, for many Nordea employees who must travel frequently a reduction in travel days would mean more time home with friends and family.

In early 2008, Dennis Jönsson was himself one of the Nordea employees on the 7:10 flight to Helsinki. He had been called by the IT management group to give a presentation on "Nordea and Global Warming," focusing on what actions Nordea could take. The underlying question in the presentation was whether Nordea could use technology more efficiently to save costs and reduce its environmental impact at the same time. The presentation focused on two areas that the IT department was accountable for. The first was air travel between different Nordic branches. The second area was computer power consumption, which accounts for a substantial part of the total power consumption at IT-intensive organizations such as banks. In the spring of 2008, Jönsson was appointed the green IT manager at Nordea.

The initiative to use technology to reduce air travel consisted of two parts. First, meeting rooms at Nordea branches were equipped with special-purpose, high-quality videoconferencing equipment. Second, desktop and laptop computers with Web cameras, headsets, and software were provided to enable two-party video calls. It was hoped that

videoconferencing and video calls would reduce travel needs as well as imp quality of collaborative work at Nordea.

In the area of computer power consumption, Nordea works on both limiting th needed to run the computer park and on innovative ways of cooling down c in use. After launching a new component in its property management sys could document power use in the Nordea offices, Nordea discovered that pow was surprisingly high at night. The reason was simple: many computers we turned off. The Power-Off project resulted in power management softwa installed on 23,100 computers at Nordea, forcing shutdown at night if the c were not in use. Settings for turning off monitors and putting computers into standby mode were also fine-tuned. This saved 3.5 million kKh annually, equivalent to 647 tons of carbon dioxide. On the server side, the IT departmen with server virtualization to reduce the number of physical machines co power.

For an IT-intensive organization such as Nordea, the cooling of computers is a s cost. The organization must pay to cool down its computer rooms at the sam spends money heating other areas. The solution was to locate its computer halls where the excess heat could be used for heating purposes or to use a cooling me a reduced environmental impact.

Today, one of Nordea's major computer halls is located next to the sea. Col seawater is used to cool the hall. By lowering the power consumption for coolin saves money and reduces its environmental impact. Nordea has noted that cut and reducing its environmental impact often go hand in hand, because lowering environmental impact frequently means consuming fewer resources, and reso money. In other words, it is difficult to find the downside in the business case IT.

The biggest obstacle to green IT is changing people's behavior and well-e practices. Corporate social responsibility, of which low environmental impact is now an integrated part in Nordea's strategy to attract and retain both customers a personnel. Guided by the European Union directive on energy use, Nordea has reduce energy consumption by 15 percent, travel by 30 percent, and paper consu 50 percent. The directive suggests that 2020 would be a feasible deadline for these goals, but Nordea has set itself a deadline of 2017. If the organizatio successful in this, then IT in its various forms will definitively play a key rol part of the problem and as part of the solution.

Case Study Questions:

(1) This case study mainly illustrates.....

(a) how to reduce Carbon dioxide emissions caused by one person airplane.

(b) how Nordea has become green with information technology.

(c) how to reduce travel for the benefit of environment as well as cost savi

(d) how Nordea can reduce global warming by using techniques and tools

(e) how to reduce power consumption by using software and information

(2) Out of the following, which one highlighted that energy consumption was high at night rather than day in Nordea?

(a) After reading the latest reports on global warming by Dennis Jönsson.
(b) After starting a new component in its property management system.
(c) After installing a different energy management software.
(d) After launching a new component system in energy management.
(e) After appointing the green IT manager at Nordea.

(3) According to this case study, reducing business travels lead to.....

(a) create work-life balance of employee in Nordea.
(b) reduce cost saving of Nordea.
(c) reduce power consumption of computer in Nordea.
(d) reduce cooling cost of computers in Nordea.
(e) create server virtualization to reduce power consumption.

(4) Out of the following statements, which is correct one?

(a) IT can be both the culprit and the solution to environmental problems.
(b) Reducing travel is not desirable from an environmental perspective.
(c) Nordea cannot use technology to save costs and reduce its negative environmental impact simultaneously.
(d) Nordea cannot use technology to save energy and reduce its environmental impact at same time.
(e) IT department is only accountable for green information technology in Noreda.

(5) According to this case study, the simple reason for more power consumption at night was:

(a) power management software failed to work properly at night.
(b) the Power Off project did not work systematically at night.
(c) failure of forcing shutdown at night if the computers were in use.
(d) difficult to attract and retain skilled personnel.
(e) employees never shutdown many computers while they leave from office.

(02 x 05 = 10 Marks)

(6) What is the main problem or main question Nordea has to find out the solution or the answer in this case study?

(02 Marks)

(7) What are the two main ways Nordea contributes to negative environmental impact in this case study?

(02 Marks)

(8) According to this case study, what are two main challenges of green information technology or green computing?

(02 Marks)

(9) What are the two main ways Nordea can reduce air travel by using technology?

(02 Marks)

(10) What sort of solutions Nordea has developed for its power consumption issue?

(02 Marks)

(Total = 20 Marks)

Q2. Multiple Choice and True or False Questions (Select Most Appropriate/Su Answer-ONLY ONE)

Multiple Choice Questions:

(1) All the hardware and software technologies a firm needs to achieve its bu objectives....

(A) Information Technology (IT)
(B) Information System (IS)
(C) Information System Literacy
(D) Information Technology Infrastructure
(E) Strategic Business Objectives of Information Systems

(2) Seeing information systems as composed of both technical and social elements:

(A) Contemporary Approach
(B) Organizational and Management View
(C) Modern Approach
(D) Sociotechnical View of Information System
(E) Management Information System

(3) A stable, formal, social structure that takes resources from the environment and proce them to produce outputs:

(A) Transaction Cost Theory
(B) Routines
(C) Organization (technical definition)
(D) Organization (behavioral definition)
(E) Agency Cost Theory

(4) Organization using networks to link people, assets and ideas to create and distrib products and services without being limited to traditional organizational boundaries physical location:

(A) Core Competency
(B) Strategic Transition
(C) Value Web
(D) Virtual Company
(E) E-commerce

(5) Enterprise Resource Planning (ERP) to integrate business processes in manufacturing a production, finance and accounting, sales and marketing, and human resources to a sing software system. Data repository where it can be used by many different parts of t business.

(A) Enterprise Applications
(B) Enterprise System
(C) Information System Application
(D) Information System at Management Level
(E) Integrated Software Application

A contemporary term for data and software tools for organizing, analyzing and providing access to data to help managers and other enterprise users make more informed decisions.

(A) Business Intelligence
(B) Business Process
(C) Business Model
(D) Business Information System
(E) Business Reengineering

Stress induced by computer use. Symptoms include aggravation, hostility toward humans, impatience, and fatigue.

(A) Ethical issues
(B) Due Process
(C) Double Edged Sword
(D) Techno-stress
(E) Social issues of Information System

Junk e-mail sent by an organization or individual to a mass audience of Internet users who have expressed no interest in the product or service being marketed.

(A) Opt-out
(B) Web beacons
(C) Spam
(D) Cookies
(E) Opt-in

Computers that provide the client computers with a variety of services and capabilities.

(A) On-demand service
(B) Cloud computing
(C) Two-tiered Client/Server architecture
(D) Networking system
(E) Server

Market demand for your firm's services, firm's business strategy, firm's IT strategy, infrastructure, and cost, Information technology assessment, Competitor firm services and Competitor firm IT infrastructure investments.

(A) Web hosting services
(B) Competitive forces models for IT infrastructure
(C) The IT infrastructure ecosystem
(D) Open source software
(E) Connection between the firm, IT infrastructure, and Business capabilities

True or False Questions:

Capability to specify the structure of the content of the database → Data Mining.

(A) True
(B) False

(12) Use Data Mining Techniques, historical data, and assumptions about futu predict outcomes of events, such as the probability a customer will respo purchase a specific product → Predictive Analytics.

(A) True
(B) False

(13) Specifies the organization's rules for sharing, disseminating, acquirin classifying, and inventorying information → Information Policy.

(A) True
(B) False

(14) Responsible for defining and organizing the structure and content of th maintaining the database → Database Management System.

(A) True
(B) False

(15) Selling goods, information, or services to customers as the main source company → Sales Revenue Model.

(A) True
(B) False

(16) The time and money spent locating a suitable product determining the be product → Search Costs.

(A) True
(B) False

(17) Tracking the click-streams (history of clicking behavior) of individuals Web sites for the purpose of understanding their interests and intention them to advertisements which are uniquely suited to their investment Targeting.

(A) True
(B) False

(18) Understand global environment, develop corporate strategy for compe organization structure and division of labour, consider management issue technology platform → When building international systems.

(A) True
(B) False

(19) Domestic exporter, multinational, franchisers, and transnational →Fou strategies.

(A) True
(B) False

(20) Use of public key cryptography working with certificate authority. Wid commerce → Public Key Infrastructure (PKI).

(A) True
(B) False

3. **Give very short answers to the following questions.**

(a) *Indicate* three new trends (changes) in Management Information Systems or three interrelated changes in the technology area.

(03 Mark)

(b) *Identify* three main activities an information system has to perform in order to produce the information that organizations need to make decisions, control operations, analyse problems, and create new products or services.

(03 Mark)

(c) *List out* at least three capabilities of Enterprise Social Networking Software.

(03 Marks)

(d) *How* business firms in Sri Lanka manage their Information Systems Function of business? (You must specify at least three ways)

(03 Marks)

(e) *List out* the key elements of a Corporate Network Infrastructure.

(03 Marks)

(f) Contemporary Digital Networks and the Internet are based on three key technologies. ***Indicate*** these three key technologies.

(03 Marks)

(g) ***What*** is 'Unified Communication'?

(02 Marks)
(Total 20 Marks)

4. (a) *What* is Software-Defined Networking (SDN)?

(03 Marks)

(b) *Specify* at least **five** e-Laws which have been adopted in Sri Lanka.

(05 Marks)

(c) *Why* business firms invest in information technology or information system? ***Discuss.***

(06 Marks)

(d) *How* would you differentiate a 'Normal or Traditional Business Firm' from a 'Digital Business Firm'? ***Explain.***

(06 Marks)

(Total 20 Marks)

Q5.

(a) "The major ethical, social, and political issues raised by Informati include the several moral dimensions". ***List out*** at least **four** such dimen

(b) ***Select*** one Social or Ethical Issue related with Information Systems in context and ***explain*** that issue by using above mentioned (a) dimensions

(c) ***How*** can Information Systems support different Global Business Strateg

(d) ***Explain*** the components of an organizational framework for security and Information Systems.

(Total